D448 PCM TRUNK CARRIER SYSTEM

INSTALLATION AND TESTING CONSIDERATIONS

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1. GENERAL

1.01 This Section provides general guidelines for installation and testing of the ITT D448 PCM trunk carrier system. Detailed instructions for installation and testing are contained in the ITTR-18-4XX Sections noted herein.

1.02 This Section has been reissued to add information on additional tools and the 19-inch bay.

2. UNPACKING AND INSPECTION

2.01 Unpack the equipment carefully. Check the packing list to ensure that the order is complete. Inspect the equipment thoroughly for shipping damage; report any damages to the transportation company. If the equipment will not be installed immediately, retain the packing material for storage of the equipment.

3. INSTALLATION AND TESTING PROCEDURES

3.01 Installation of the equipment consists of physical installation, electrical installation, option selection, and pretest. Testing of the equipment is divided into recommended testing and optional testing. All installation and test procedures are presented in a step/procedure format.

3.02 Fig. 1 provides detailed instructions on the procedures involved in installing and testing the equipment. The figure gives general directions and references a Section where the detailed procedures are located. An explanation of the symbols used in Fig. 1 is provided in Table A.

4. RECOMMENDED TOOLS AND TEST EQUIPMENT

INSTALLATION TOOLS

A. Standard Hand Tools

4.01 The following hand tools are considered standard by ITT and will not be called out individually in APPARATUS listings:

(a) Flat-blade screwdrivers
(b) Long-nosed pliers
(c) Adjustable wrench
(d) Wire strippers
(e) Diagonal cutters
(f) Hand-wrap/Unwrap tool

B. Additional Tools

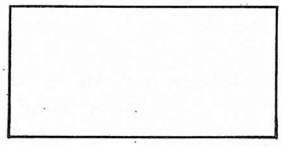
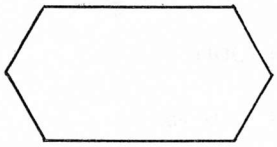
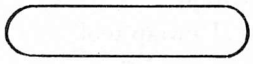
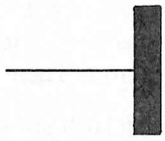
4.02 In addition to the tools listed in Para. 4.01, special wire-wrap tools may be needed to wire-wrap to channel unit connectors. These special tools are:

(a) 26AWG bit (Gardner-Denver 505279 or equivalent)
(b) 24AWG bit (Gardner-Denver 505415 or equivalent)
(c) 22AWG bit (Gardner-Denver 504939 or equivalent)
(d) 26AWG sleeve (Gardner-Denver 507100 or equivalent)
(e) 24AWG sleeve (Gardner-Denver 502129 or equivalent)
(f) 22AWG sleeve (Gardner-Denver 507939 or equivalent)
(g) Unwrap tool (Gardner-Denver 509489 or equivalent)

TEST EQUIPMENT

4.03 A listing and descriptions of test equipment that may be used with the equipment is provided in Section ITTR-18-600.

TABLE A

SYMBOL	NAME	DESCRIPTION
	Instruction Block	An instruction block is used to enclose a discrete statement. Each block has a reference number in brackets [ ]. This is for reference only and does not imply sequence.
	Decision Block	A decision block is used to enclose an interrogative statement. Each block has a reference number in brackets [ ]. This is for reference only and does not imply sequence. Each block normally has two responses (Yes-No); however, multiple responses are possible. For example, two "Yes" responses will be numbered Yes (1) and Yes (2). Always try the (1) response first. If the problem is not corrected, repeat the procedure with the (2) reponse.
	Reference Bubble	A reference bubble is used at the termination of a flowline to represent an exit from that figure or subfigure.
	End-of-Procedure	The end-of-procedure symbol is used to denote that the flow-charted procedure, as defined by the procedure title, has been completed.

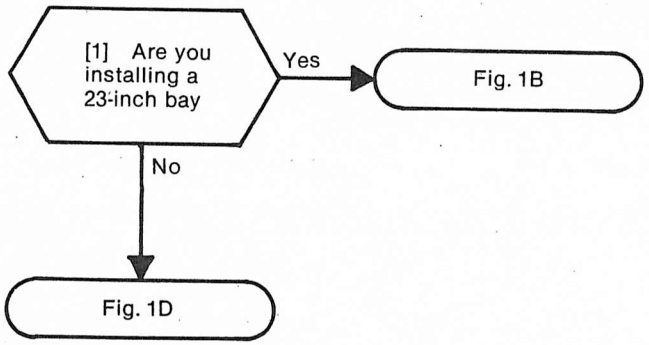


Fig. 1A—Installation and Testing

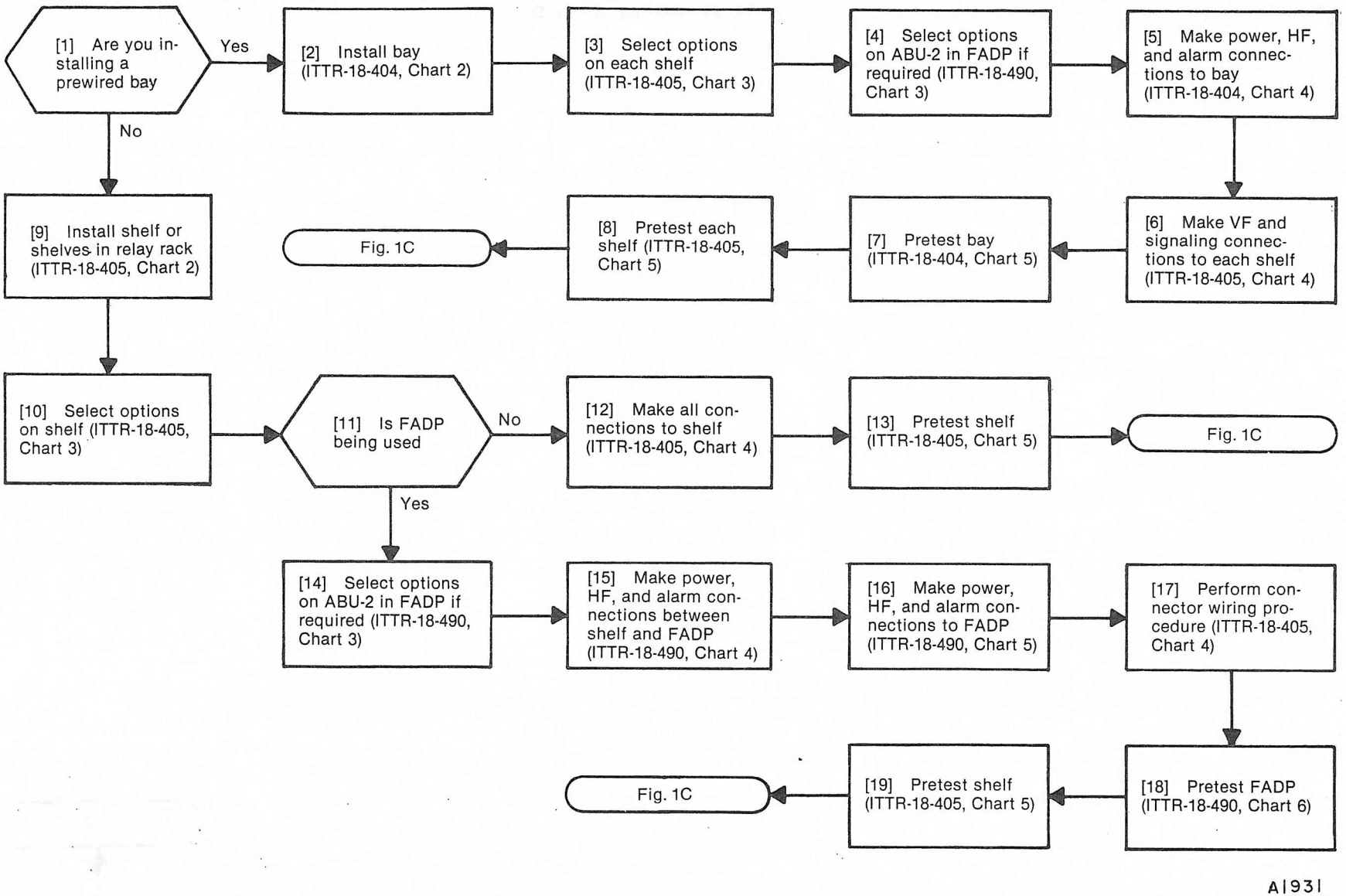

[1] Are you installing a prewired bay
Yes
No
[2] Install bay (ITTR-18-404, Chart 2)
[3] Select options on each shelf (ITTR-18-405, Chart 3)
[4] Select options on ABU-2 in FADP if required (ITTR-18-490, Chart 3)
[5] Make power, HF, and alarm connections to bay (ITTR-18-404, Chart 4)
[6] Make VF and signaling connections to each shelf (ITTR-18-405, Chart 4)
[7] Pretest bay (ITTR-18-404, Chart 5)
[8] Pretest each shelf (ITTR-18-405, Chart 5)
Fig. 1C
[9] Install shelf or shelves in relay rack (ITTR-18-405, Chart 2)
[10] Select options on shelf (ITTR-18-405, Chart 3)
[11] Is FADP being used
No
Yes
[12] Make all connections to shelf (ITTR-18-405, Chart 4)
[13] Pretest shelf (ITTR-18-405, Chart 5)
Fig. 1C
[14] Select options on ABU-2 in FADP if required (ITTR-18-490, Chart 3)
[15] Make power, HF, and alarm connections between shelf and FADP (ITTR-18-490, Chart 4)
[16] Make power, HF, and alarm connections to FADP (ITTR-18-490, Chart 5)
[17] Perform connector wiring procedure (ITTR-18-405, Chart 4)
[18] Pretest FADP (ITTR-18-490, Chart 6)
[19] Pretest shelf (ITTR-18-405, Chart 5)
Fig. 1C
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Fig. 1B—Installation and Testing

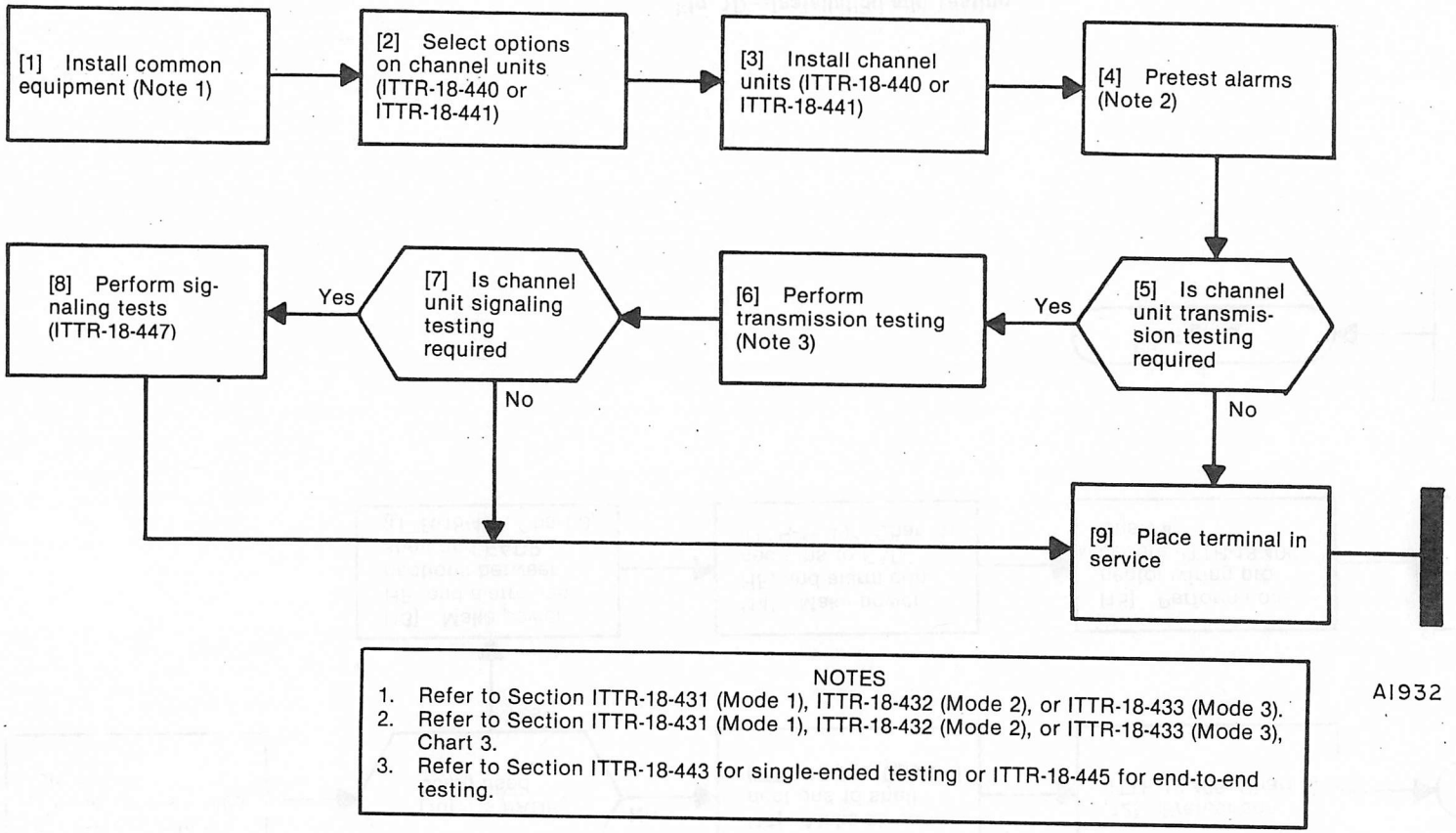
[1] Install common equipment (Note 1)
[2] Select options on channel units (ITTR-18-440 or ITTR-18-441)
[3] Install channel units (ITTR-18-440 or ITTR-18-441)
[4] Pretest alarms (Note 2)
[5] Is channel unit transmission testing required
Yes
No
[6] Perform transmission testing (Note 3)
[7] Is channel unit signaling testing required
Yes
No
[8] Perform signaling tests (ITTR-18-447)
[9] Place terminal in service
NOTES
1. Refer to Section ITTR-18-431 (Mode 1), ITTR-18-432 (Mode 2), or ITTR-18-433 (Mode 3).
2. Refer to Section ITTR-18-431 (Mode 1), ITTR-18-432 (Mode 2), or ITTR-18-433 (Mode 3), Chart 3.
3. Refer to Section ITTR-18-443 for single-ended testing or ITTR-18-445 for end-to-end testing.
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Fig. 1C—Installation and Testing

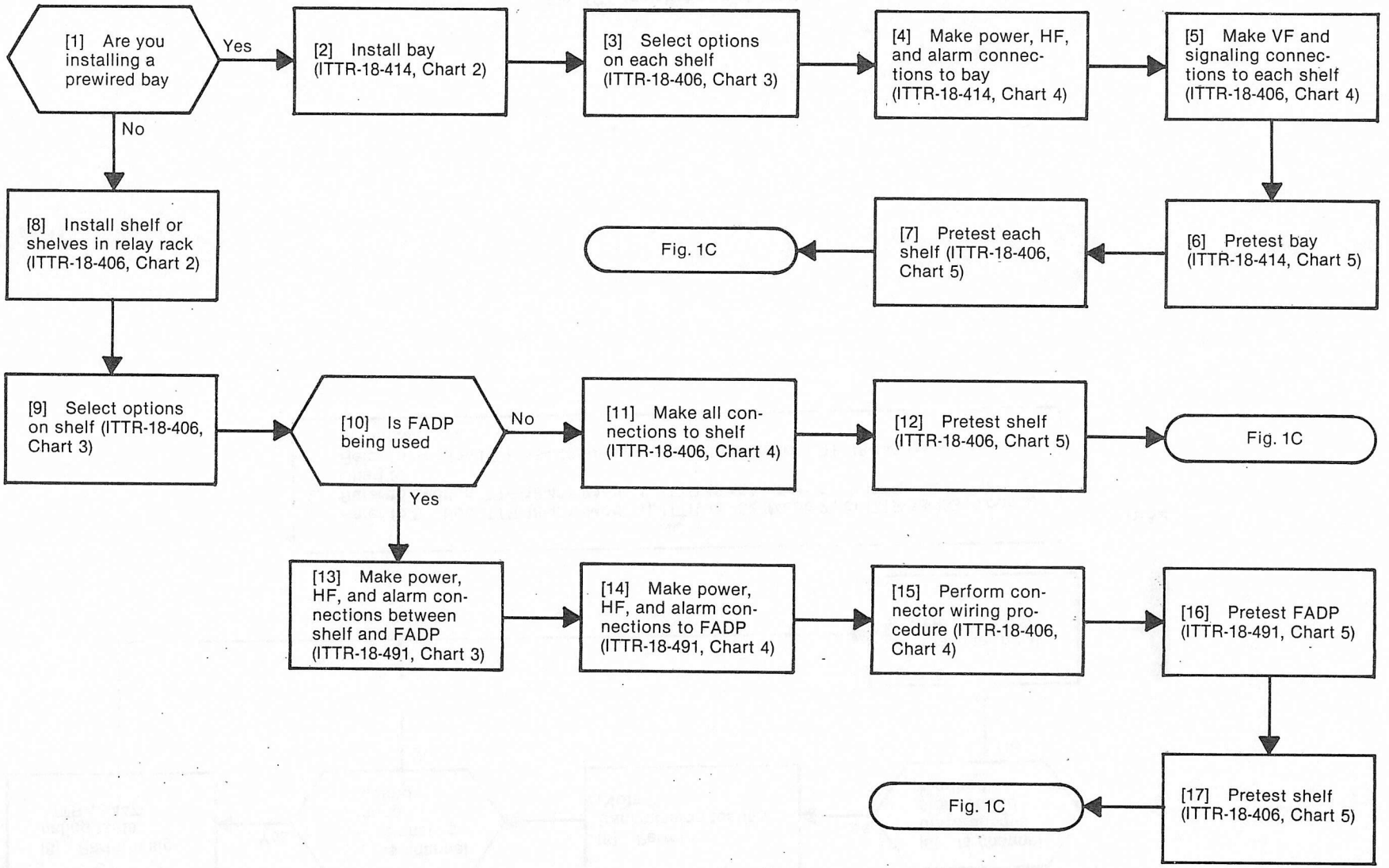
[1] Are you installing a prewired bay
Yes
No
[2] Install bay (ITTR-18-414, Chart 2)
[3] Select options on each shelf (ITTR-18-406, Chart 3)
[4] Make power, HF, and alarm connections to bay (ITTR-18-414, Chart 4)
[5] Make VF and signaling connections to each shelf (ITTR-18-406, Chart 4)
[6] Pretest bay (ITTR-18-414, Chart 5)
[7] Pretest each shelf (ITTR-18-406, Chart 5)
Fig. 1C
[8] Install shelf or shelves in relay rack (ITTR-18-406, Chart 2)
[9] Select options on shelf (ITTR-18-406, Chart 3)
[10] Is FADP being used
No
Yes
[11] Make all connections to shelf (ITTR-18-406, Chart 4)
[12] Pretest shelf (ITTR-18-406, Chart 5)
Fig. 1C
[13] Make power, HF, and alarm connections between shelf and FADP (ITTR-18-491, Chart 3)
[14] Make power, HF, and alarm connections to FADP (ITTR-18-491, Chart 4)
[15] Perform connector wiring procedure (ITTR-18-406, Chart 4)
[16] Pretest FADP (ITTR-18-491, Chart 5)
[17] Pretest shelf (ITTR-18-406, Chart 5)
Fig. 1C

Fig. 1D—Installation and Testing